Sheet 1 of 1

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Complete if Known				
Application Number	10/085,469			
Filing Date	February 28, 2002			
First Named Inventor	Fred S. Cannon et al.			
Art Unit	1724			
Examiner Name	Cintins Ivars			
Attorney Docket Number	1665-1-1			

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Application Number	10/085,469			
Filing Date	February 28, 2002			
First Named Inventor	Fred S. Cannon et al.			
Group Art Unit	1724			
Examiner Name	Cintins Ivars			
Attorney Docket Number	1665-1-1			

	OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where nublished.	T <sup>2</sup>		
SLA!	D	Herzing et al., "Activated Carbon Adsorption of the Odorous Compounds 2-Methylisoborneol and Geosmin," Journal AWWA, April 1977, pp. 223-228.			
	E	Lalezary-Craig et al., "Optimizing the Removal of Geosmin and 2-Methylisoborneol by Powdered Activated Carbon," Research and Technology.			
`	F	Chen et al., "Evaluation of Granular Activated Carbons for Removal of Methylisoborneol to Below Odor Threshold Concentration in Drinking Water,"			
		Wat. Res. Vol. 31, No. 5, pp. 1155-1161, 1997, Elsevier Science Ltd.			
\	G	Ellis et al., "Removal of Geosmin and Methylisoborneol from Drinking Water by Adsorption on Ultrastable Zeolite-Y," Wat. Res., Vol. 27, No. 4, pp. 535-539,			
		1993, Pergamon Press Ltd.	-		
\\	Н	Terauchi et al., "Studies on a Biological Filter for Musty Odor Removal in Drinking Water Treatment Processes," Wat. Sci. Tech., Vol. 31, No. 11, pp. 229-			
		235, 1995, IAWQ.			
		Lalezary et al., "Evaluating Activated Carbons for Removing Low Concentrations of Taste- and Odor-Producing Organics," Research and Technology			
	J	Coughlin et al., "Role of Surface Acidity in the Adsorption of Organic Pollutants on the Surface of Carbon," Environmental Science and Technology, Jan. 1958, pp. 291-297.			
V	К	Randtke et al., "Evaluating GAC Adsorptive Capacity." Journal AWWA, August 1983, pp. 406-413.			
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Complete if Known					
Application Number	10/085,469				
Filing Date	February 28, 2002				
First Named Inventor	Fred S. Cannon et al.				
Group Art Unit	1724				
Examiner Name	Cintins Ivars				
Attorney Docket Number	1665-1-1				

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner Initials	Cite No 1	Include name of lithe author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or couptry where published.	Τ-
5LA 1	L	McCreary et al "Granular Activated Carbon in Water Treatment, "Journal AWWA, August 1977, pp. 437-444.	
ψ	М	Levi et al., "Offensive Tastes and Odors Occurring After Chlorine Addition in Water Treatment Processes," Wat. Sci. Tech., Vol. 20, No. 8/9, pp. 269-274,	
		1998, IAWPRC.	
SU) 1	N	Chudyk et al., "Activated Carbon Versus Resin Adsorption of 2-Methylisoborneol and Chloroform," Journal AWWA, Sept. 1979, pp. 529-538.	
	0	Gillogly et al., "Kinetic and Equilibrium Studies of 14C-MIB Adsorption on PAC in Natural Water," University of Illinois at Urbana-Champaign, Dept. of Civil	
		Engineering, pp. 627-645.	
1	P	Vik et al., "Pilot Scale Studies of Geosmin and 2-Methylisoborneol Removal." Wat. Sci. Tech. Vol. 20, No. 8/9, pp. 229-236, 1988, IAWPRC.	
	Q	Huang et al., "Adsorption Kinetics of MIB and Geosmin, " April 1996, pp. 116-128.	
	R	Ando et al., "Removal of Musty-Odorous Compounds in Water and Retained in Algal Cells Through Water Purification Process," Wat. Sci. Tech., Vol. 25, No. 2,	
		pp. 299-306. 1992. IAWPRC.	
	S	McGuire et al., "Overview of Technology for Controlling Off-Flavors in Drinking Water," Wat. Sci. Tech., Vol. 20, No. 8/9, pp. 215-228, 1998 IAWPRC.	

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Application Number	10/085,469			
Filing Date	February 28, 2002			
First Named Inventor	Fred S. Cannon et al.			
Group Art Unit	1724			
Examiner Name	Cintins Ivars			
Attorney Docket Number	1665-1-1			

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